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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,648

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Bernardus Hendrikus Wilhelmu Hendriks

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2627

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,648	<b>Applicant(s)</b> HENDRIKS, BERNARDUS HENDRIKUS WILHELMU	
	<b>Examiner</b> KIM CHU	<b>Art Unit</b> 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on Pre-Amendment filed on 1/6/2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 10 is/are rejected.
- 7) ☒ Claim(s) 2-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

1. Claims 1, 2, 4, 6 and 8-10 are objected to because of the following informalities:

(a) in claim 1, lines 2 and 4, the numerical labels such as "(7)" and "(51, 52, 53)" should be deleted;

(b) similarly, in Claims 6 and 8-10, numerical labels such as "(7)", "(2)" and "(9)" should be deleted;

(c) in Claim 2, lines 9 and 15, the terms "□. the wavelength" should be changed to -- $\lambda$  the wavelength--;

(d) in Claim 4, lines 4, the term "the compensating function" should be changed to --a compensating function--;

(e) in Claim 6, the variables  $dn_2$ ,  $d\lambda$  and  $dn_1$  need labels to explain its meanings; and

(f) in Claim 10, lines 1 and 2, the term "comprising an optical arrangement" should be changed to --comprising the optical arrangement--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless -  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

3. Claims 1 and 10 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kim et al. (U.S. Patent 6,853,614).

Kim teaches an optical system having all of the elements and means as recited in claims 1 and 10. For example, Kim teaches the following:

(a) with respect to Claim 1, an arrangement of optical elements (Fig. 5) for interacting with a radiation beam 101a the optical arrangement comprising an optical system and a compensator 130 (Fig. 5), the compensator 130 including a first optical element 31, the first optical element 31 having a phase structure (Fig. 2) comprising stepped annular areas forming a non-periodic pattern of optical paths of different lengths (Fig. 2; column 6, lines 1-14), the compensator 130 being arranged to generate: a first wavefront deviation (column 5, lines 63-66) introduced by the variation of a first parameter (step pattern and refractive index of 31) during interaction of the radiation

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beam 101a (Fig. 5) with the compensator 130, the first wavefront deviation being arranged to counteract a wavefront deviation (aberration correction) introduced by the variation of the first parameter during interaction of the radiation beam with the optical system; and a second wavefront deviation introduced by the variation of a second, different, parameter (step pattern and refractive index of 35) during interaction of the radiation beam 101a (Fig. 5) with the compensator 130, characterized in that the compensator 130 further includes a second optical element 35 formed from a different material (different refractive index; column 5, lines 63-66) than the first optical element 31 and having a phase structure comprising stepped annular areas forming a non-periodic pattern of optical paths of different lengths (Fig. 2), the second optical element 35 being arranged to reduce the second wavefront deviation (Fig. 5; aberration correction).

(b) with respect to Claim 10, the optical arrangement is an optical scanning device (Fig. 5), the device being arranged for scanning an optical record carrier 100 having an information layer using a radiation source 101 (Fig. 5).

***Allowable Subject Matter***

4. Claims 2-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 2, the prior art of record fails to teach or fairly suggest an optical compensator having the following features:

(a) the annular areas of the first optical element are stepped by a step height of  $h_j$  and the annular areas of the second optical element are stepped by a step height of  $b_j$  and wherein the first optical element is arranged such that, for each said annular area, the step height  $h_j$  is substantially equal to:

$$h_j = m_j * \lambda / (n_1 - 1)$$

where  $m_j$  is an integer,  $\lambda$  the wavelength and  $n_1$  is the refractive index of the material from which the first optical element is made, and

(b) the second optical element is arranged such that, for each said annular area, the step height  $b_j$  is substantially

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$$b_j = q_j * \lambda / (n_2 - 1)$$

where  $q_j$  is an integer,  $\lambda$  the wavelength and  $n_2$  the refractive index of the material of which the second optical element is made.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

#### ***Related Prior Art***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nishiwaki et al. (7,126,904) is pertinent because Nishiwaki teaches a diffractive grating having two different annular patterns.

Nakai (6,873,463) is pertinent because Nakai teaches a diffractive grating having two different refractive indexes.

Shimano et al. (6,278,548) is pertinent because Shimano teaches a diffractive grating having two different annular patterns.

Londono et al. (5,260,828) is pertinent because Londono teaches a diffractive grating having two different annular patterns.

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7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/Kim-Kwok CHU/

Examiner AU2627

May 8, 2008

(571) 272-7585

/HOA T NGUYEN/

Supervisory Patent Examiner, Art Unit 2627

May 11<sup>th</sup>, 2008